



Acid Base,
Hate No Longer



ROME (The trick)

- ◆ R
 - ◆ O
 - PH \uparrow PCO₂ \downarrow Alkalosis
 - PH \downarrow PCO₂ \uparrow Acidosis
 - ◆ M
 - ◆ E
 - PH \uparrow PCO₂ \uparrow Alkalosis
 - PH \downarrow PCO₂ \downarrow Acidosis
- ◆ Respiratory
- ◆ Opposite
- ◆ Metabolic
- ◆ Equal



Norms

- ◆ PH 7.35 – 7.45
- ◆ PCO_2 35 – 45
- ◆ HCO_3 22 – 26



Respiratory Acidosis

◆ Symptoms

- Rapid, Shallow Respirations
- Dyspnea
- Disorientation
- Muscle Weakness



Metabolic Acidosis

◆ Symptoms

- Disorientation
- Kussmaul Respirations
- Muscle Twitching
- Changes in LOC



Respiratory Alkalosis

◆ Symptoms

- Tingling of Extremities
- Confusion
- Deep, Rapid Breathing
- Seizures



Metabolic Alkalosis

◆ Symptoms

- Nausea and vomiting
- Restlessness
- Slow respirations
- Arrhythmias



Give it a try

86 y.o female complaining of muscle weakness, shortness of breath, and is confused



Here's a little help

- ◆ pH shows 7.20
- ◆ PCO_2 62
- ◆ HCO_3 40



Survey Says:

Respiratory Acidosis



Give it a try II

42 y.o male with hx of IDDM initially confused, now responsive to painful stimuli, Kussmaul respirations and twitching of the Right arm.



Here's a little help

- ◆ pH 6.9
- ◆ PCO_2 45
- ◆ HCO_3 20



Survey Says:

Metabolic Acidosis



Give it a try III

16 y.o female who has been arguing with her boyfriend c/o SOB—respirations are deep and rapid, Tingling of Extremities, and begins to seize as you are loading her into the ambulance



Here's a little help

- ◆ pH 7.55
- ◆ PCO_2 20
- ◆ HCO_3 21



Survey Says:

Respiratory Alkalosis



Ok The Last One Standing:

As a joke you decide to place laxatives and lasix in your partner's lunch. He is now complaining of H/A, N/V/D, and unable to get comfortable. After laughing at him you decide to check on him his respirations are 6 showing a SB with PVC on the Monitor.



Here's a little help

- ◆ pH 8.00
- ◆ PCO_2 45
- ◆ HCO_3 55



The ER Doc. Says:

“Boy, you are good, you are right it is
Metabolic Alkalosis,
How did you figure it out without doing
ABGs.” You reply with a simple, “I’m
a Paramedic and that is what we do.”

